

Form PTO-1449 U.S. Department of Commerce, Patent and Trademark Office					Atty Docket No. P002-2		Serial No. 09/852824 05/10/01	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)					Applicant Charles W.C. Lin			
					Filing Date Herewith	Group Art Unit		
U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DNC	AA	4,955,523	09/1990	Calomagno et al.	228	179		
	AB	4,970,571	11/1990	Yamakawa et al.	357	71		
	AC	5,074,947	12/1991	Estes et al.	156	307.3		
	AD	5,106,461	04/1992	Volfson et al.	205	125		
	AE	5,116,463	05/1992	Lin et al.	156	653		
	AF	5,137,845	08/1992	Lochon et al.	437	183		
	AG	5,167,992	12/1992	Lin et al.	427	437		
	AH	5,196,371	03/1993	Kulesza et al.	437	183		
	AI	5,209,817	05/1993	Ahmad et al.	156	643		
	AJ	5,237,130	08/1993	Kulesza et al.	174	260		
	AK	5,260,234	11/1993	Long	437	203		
	AL	5,275,330	01/1994	Issacs et al.	228	180.2		
↓	AM	5,284,796	02/1994	Nakanishi et al.	437	183		
Foreign Patent Documents								
								Translation
		Document	Date	Country	Class	Subclass	Yes	No
DNC	AN	EP 0 718 882 A1	06/1996	European Patent Office	H01L	23/057		
	AO	WO 97/38563	10/1997	WIPO	H05K	1/03		
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AP	Markstein et al., "Controlling the Variables in Stencil Printing," Electronic Packaging & Production, February 1997, pp. 48-56.						
↓	AQ	Elenius, "Choosing a Flip Chip Bumping Supplier - Technology an IC Package contractor should look for," Advanced Packaging, March/April 1998, pp. 70-73.						
Examiner D.M. CONN			Date Considered 4-16-02					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your next communication to Applicant.								

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*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
Dm C	AA	5,293,067	03/1994	Thompson et al.	257	668		
	AB	5,327,010	07/1994	Uenaka et al.	257	679		
	AC	5,334,804	08/1994	Love et al.	174	267		
	AD	5,346,750	09/1994	Hatakeyama et al.	428	209		
	AE	5,355,283	10/1994	Marrs et al.	361	760		
	AF	5,358,621	10/1994	Oyama	205	123		
	AG	5,407,864	04/1995	Kim	437	203		
	AH	5,424,245	06/1995	Gurtler et al..	437	183		
	AI	5,438,477	08/1995	Pasch	361	689		
	AJ	5,439,162	08/1995	George et al.	228	180.22		
	AK	5,447,886	09/1995	Rai	437	183		
	AL	5,454,161	10/1995	Beilin et al.	29	852		
↓	AM	5,454,928	10/1995	Rogers et al.	205	125		
Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
Dm C	AN	WO 99/57762	11/1999	WIPO	H01L	23/48		
	AO							
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AP	Erickson, "Wafer Bumping: The Missing Link for DCA," Electronic Packaging & Production, July 1998, pp. 43-46.						
↓	AQ	Kuchenmeister et al., "Film Chip Interconnection Systems Prepared By Wet Chemical Metallization," IEEE publication 0-7803-4526-6/98, June 1998, 5 pages.						
Examiner D.M. CONGB		Date Considered 4-16-02						
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U.S. Patent Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
Dml	AA	5,475,236	12/1995	Yoshizaki	257	48	
	AB	5,477,933	12/1995	Nguyen	174	262	
	AC	5,478,007	12/1995	Marrs	228	180.22	
	AD	5,483,421	01/1996	Gedney et al.	361	771	
	AE	5,484,647	01/1996	Nakatani et al.	428	209	
	AF	5,493,096	02/1996	Koh	219	121.71	
	AG	5,508,229	04/1996	Baker	437	183	
	AH	5,525,065	06/1996	Sobhani	439	67	
	AI	5,536,973	07/1996	Yamaji	257	737	
	AJ	5,542,601	08/1996	Fallon et al.	228	119	
	AK	5,547,740	08/1996	Higdon et al.	428	209	
	AL	5,556,810	09/1996	Fujitsu	437	209	
↓	AM	5,556,814	09/1996	Inoue et al.	437	230	

Foreign Patent Documents

						Translation		
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							

Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)

Dml	AP	Ghaffarian, "Long Time BGA Assembly Reliability," Advancing Microelectronics, Vol. 25, No. 6, September/October 1998, pp. 20-23.
Dml	AQ	U.S. Application Serial No. 09/120,408, filed July 22, 1998, entitled "Flip Chip Assembly With Via Interconnection"

Examiner D.M. Collins Date Considered 4-16-02

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U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DNC	AA	5,564,181	10/1996	Dineen et al.	29	841		
	AB	5,572,069	11/1996	Schneider	257	690		
	AC	5,576,052	11/1996	Arledge et al.	427	98		
	AD	5,595,943	01/1997	Itabashi et al.	437	230		
	AE	5,599,744	02/1997	Koh et al.	437	195		
	AF	5,611,140	03/1997	Kulesza et al.	29	832		
	AG	5,611,884	03/1997	Bearinger et al.	156	325		
	AH	5,613,296	03/1997	Kurino et al.	29	852		
	AI	5,614,114	03/1997	Owen	219	121.66		
	AJ	5,615,477	04/1997	Sweitzer	29	840		
	AK	5,619,791	04/1997	Lambrecht Jr. et al.	29	852		
	AL	5,627,405	05/1997	Chillara	257	668		
V	AM	5,627,406	05/1997	Pace	257	700		
Foreign Patent Documents							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
DNC	AP	U.S. Application Serial No. 09/464,562, filed December 16, 1999, entitled "Bumpless Flip Chip Assembly With Strips And Via-Fill"						
DNC	AQ	U.S. Application Serial No. 09/464,561, filed December 16, 1999, entitled "Bumpless Flip Chip Assembly With Strips-In-Via And Plating"						
Examiner <u>D. N. COLTS</u>			Date Considered <u>4-16-02</u>					
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				Filing Date Herewith	Group Art Unit			
U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DmC	AA	5,633,204	05/1997	Tago et al.	438	614		
	AB	5,637,920	06/1997	Loo	257	700		
	AC	5,641,113	06/1997	Somaki et al.	228	180.22		
	AD	5,645,628	07/1997	Endo et al.	106	1.23		
	AE	5,646,067	07/1997	Gaul	437	180		
	AF	5,648,686	07/1997	Hirano et al.	257	778		
	AG	5,654,584	08/1997	Fujitsu	257	666		
	AH	5,656,858	08/1997	Kondo et al.	257	737		
	AI	5,663,598	09/1997	Lake et al.	257	737		
	AJ	5,665,652	09/1997	Shimizu	438	127		
	AK	5,666,008	09/1997	Tomita et al.	257	778		
	AL	5,669,545	09/1997	Pham et al.	228	1.1		
↓	AM	5,674,785	10/1997	Akram et al.	437	217		
Foreign Patent Documents							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AP							
	AQ							
Examiner DmC 07/78			Date Considered 9-16-02					
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U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DmC	AA	5,674,787	10/1997	Zhao et al.	437	230		
	AB	5,682,061	10/1997	Khandros et al.	257	666		
	AC	5,691,041	11/1997	Frankeny et al.	428	209		
	AD	5,722,162	03/1998	Chou et al.	29	852		
	AE	5,723,369	03/1998	Barber	438	106		
	AF	5,731,223	03/1998	Padmanabhan	437	183		
	AG	5,739,585	04/1998	Akram et al.	257	698		
	AH	5,744,859	04/1998	Ouchida	257	668		
	AI	5,757,071	05/1998	Bhansali	257	697		
	AJ	5,757,081	05/1998	Chang et al.	257	778		
	AK	5,764,486	06/1998	Pendse	361	774		
	AL	5,774,340	06/1998	Chang et al.	361	771		
V	AM	5,789,271	08/1998	Akram	438	18		
Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AP							
	AQ							
Examiner D.M. Cai/73			Date Considered 4-16-02					
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		Filing Date Herewith	Group Art Unit

U.S. Patent Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DnQ	AA	5,798,285	08/1998	Bentlage et al.	438	108	
	AB	5,801,072	09/1998	Barber	438	107	
	AC	5,801,447	09/1998	Hirano et al.	257	778	
	AD	5,804,771	09/1998	McMahon et al.	174	255	
	AE	5,808,360	09/1998	Akram	257	738	
	AF	5,811,879	09/1998	Akram	257	723	
	AG	5,817,541	10/1998	Averkiou et al.	438	107	
	AH	5,822,856	10/1998	Bhatt et al.	29	832	
	AI	5,834,844	11/1998	Akagawa et al.	257	734	
	AJ	5,863,816	01/1999	Cho	438	123	
	AK	5,870,289	02/1999	Tokuda et al.	361	779	
	AL	5,883,435	03/1999	Geffken et al.	257	758	
	AM	5,925,931	07/1999	Yamamoto	257	737	

Foreign Patent Documents

						Translation		
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							

Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)

	AP	
	AQ	

Examiner D.M. Collins Date Considered 4-16-02

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U.S. Patent Documents							
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DNL	AA	5,994,222	11/1999	Smith et al.	438	689	
1	AB	6,012,224	01/2000	DiStefano et al.	29	840	
	AC	6,018,196	01/2000	Noddin	257	777	
	AD	6,084,297	06/2000	Brooks et al.	257	698	
	AE	6,103,552	08/2000	Lin	438	113	
	AF	6,103,992	08/2000	Noddin	219	121.71	
	AG						
	AH	4,984,358	01/1991	Nelson	29	830	
	AI	5,261,593	11/1993	Casson et al.	228	180.22	
	AJ	5,397,921	03/1995	Karnezos	257	779	
	AK	5,487,218	01/1996	Bhatt et al.	29	852	
	AL	5,489,804	02/1996	Pasch	257	778	
W	AM	5,583,073	12/1996	Lin et al.	439	183	
Foreign Patent Documents							
						Translation	
		Document	Date	Country	Class	Subclass	Yes
	AN						
	AO						
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AP						
	AQ						
Examiner <i>J.M. (50078)</i>		Date Considered <i>4-16-02</i>					
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U.S. Patent Documents								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DAC	AA	5,736,456	04/1998	Akram	438	614		
	AB	5,803,340	09/1998	Yeh et al.	228	56.3		
	AC	5,861,666	01/1999	Bellaar	257	686		
	AD	6,013,877	01/2000	Degani et al.	174	264		
	AE	6,020,561	02/2000	Ishida et al.	174	261		
	AF	6,037,665	03/2000	Miyazaki	257	773		
	AG	6,046,909	04/2000	Joy	361	748		
	AH	6,084,781	07/2000	Klein	361	771		
↓	AI	6,127,204	10/2000	Isaacs et al.	438	106		
	AJ							
	AK							
	AL							
	AM							
Foreign Patent Documents								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	AN							
	AO							
Other Art (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AP							
	AQ							
Examiner <i>DAC</i>			Date Considered <i>4-16-07</i>					
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INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Charles W.C. Lin							
		Filing Date May 10, 2001	Group Art Unit 2812						
U.S. Patent Documents									
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate		
DNR	AA	3,577,037	05/1971	Di Pietro et al.	317	101			
	AB	4,074,342	02/1978	Honn et al.	361	411			
	AC	5,769,163	08/1998	Glenn et al.	257	698			
	AD	6,040,630	03/2000	Panchou et al.	257	783			
	AE	6,087,597	07/2000	Shimada et al.	174	263			
	AF	6,187,615	02/2001	Kim et al.	438	113			
	AG	6,287,893	09/2001	Elenius et al.	438	108			
	AH								
	AI								
	AJ								
	AK								
	AL								
	AM								
Foreign Patent Documents									
							Translation		
		Document	Date	Country	Class	Subclass	Yes	No	
	AN								
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